

#7

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent

In re patent application of: HOOK et al.

Serial No.: 09/810,428

Filed: March 19, 2001

For: CROSS-REACTIVE DISPLACING ANTIBODIES

FROM COLLAGEN-BINDING PROTEINS AND METHOD

OF IDENTIFICATION AND USE



Examiner:

Art Unit:

Docket No.:

P06668US03/BAS

RESPONSE TO NOTICE TO COMPLY WITH
SEQUENCE LISTING REQUIREMENTS

Honorable Assistant Commissioner of Patents and Trademarks

Washington, D.C. 20231

SIR:

In response to the Notices dated June 7, 2001 and August 15, 2001, please amend the above-identified application as follows:

IN THE SPECIFICATION:

Please amend the specification to include the new paragraphs identifying the Sequence ID numbers submitted herewith as Attachment A. A marked-up version of the amended paragraphs is submitted herewith as Attachment B.

After page 70, please insert the attached sequence listing.

REMARKS

Applicants have now provided the required Sequence Listing and computer diskette, and in addition have amended the specification accordingly to refer to the Sequence ID numbers.

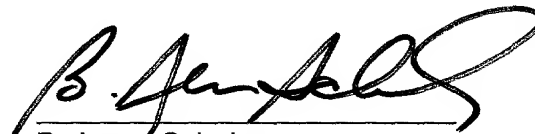
09810428 " 100901
T0600T" 8240T860

Applicant states in accordance with 37 C.F.R. § 1.821(f) that the content of the enclosed paper sequence listing and computer readable form are the same, and that in accordance with 37 C.F.R. § 1.821(g), the enclosed submission contains no new matter.

Applicant thus submits that the application is now in compliance with the sequence listing requirements, and examination and allowance of this case is earnestly solicited.

Respectfully submitted,

October 9, 2001



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Registration No. 31,877

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ATTACHMENT A

Clean Amended Substitute Specification Paragraphs

A clean version of page 9, lines 1-5 is provided.

Figure 2A. Sequence alignment of CNA19 and ACE19. ClustalW with default parameters was used. Shaded amino acid residues were identical and similar residues. The β -strands and α -helices of CNA19 determined by X-ray crystallography were indicated by dark bars above the corresponding regions of CNA19. β -strands A, B, a part of D, E and H are the ones that form the observed trench and are indicated by *. Sequences for CNA19 are identified as SEQ ID NOS. 5 to 8, and sequences for ACE19 are identified as SEQ ID NOS. 8 to 12.

A clean version of page 50, lines 12-22 is provided.

3B12VLG-4 (variable light sequence)

GAAGTTGTGATGACCCAACTCCACTCTCCCTGCCTGTCAGTCTTGGCGATCACGC
CTCCATCTCTTGCAGATCTAGTCAGCGCCTTGACACAGTAATGAAAACACCTATTT
ACATTGGTATCTGCAGAAGCCAGGCCAGTCTCCAAAGCTCCTGATCTACAAAGTTT
CCAACCGATTTTCTGGGGTCCCAGACAGGTTCAAGTGGCAGTGGATCAGGGACAGA
TTTCACTCAAGATCAGCAGAGTGGAGGCTGAGGATCTGGGAGTTTATTTCTGCT
CTCAAAGTACGCATGTTCTCCACGTTCTGGAGGGGGGACCAGGCTGGAAATAAA
A (SEQ ID NO. 1).

EVVMTQTPLSLPVSLGDHASISCRSSQRLVHSNENTYLHWYLQKPGQSPKLLIYKVS
NRFSGVPDRFSGSGSGTDFTLKISRVEAEDLGVYFCSQSTHVPPTFGGGTRLEIK (SEQ
ID NO. 2)

- Amino acids representing a CDR are underlined

A clean version of page 51, lines 1-12 is provided.

3B12VHB-1 (variable heavy sequence)

CAGGTTTCAGCTGCAGCAGTCTGGAGCTGAGCTGATGAAGCCTGGGGCCTCAGTG
AAGATCTCCTGCAAGGCTGCTGGCTACACATTCAGTCCCTACTGGATAGAGTGGTT
AAAGCAGAGGCCTGGACATGGCCTTGAGTGGATTGGAGAGATTTTACCTGGAAGT
GGAAATATTAACATAATGAGAAGTTCAAGGACAAGGCCACATTCAGTCTGATAC
ATCCTCCAACACAGTTTACATGCAAGTCAGCAGCCTGACATCTGAGGACTCTGCCG
TCTATTACTGTGCAAGAGAGGAGGATGGTTACCCGGCCTGGTTTGCTTACTGGGG
CCAAGGGACTCTGGTCACTGTCTCTGCA (SEQ ID NO. 3).

QVQLQQSGAELMKPGASVKISCKAAGYTFSPYWIEWLKQRPGHGLEWIGEILPGSGNI
NYNEKFKDKATFTADTSSNTVYMQVSSLTSEDSAVYYCAREEDGYPAWFAYWGQGT
LVTVSA (SEQ ID NO. 4).

- Amino acids representing a CDR are underlined

A clean version of the heading at page 58, line 1 is provided.

Table 1A. Oligonucleotide primers used in this study (SEQ ID NOS. 13 TO 30, respectively).

09810423-10001
T0600T-3240T860

ATTACHMENT B

Marked Up Copy of Specification With Amended Paragraphs

A marked up version of page 9, lines 1-5 is provided.

Figure 2A. Sequence alignment of CNA19 and ACE19. ClustalW with default parameters was used. Shaded amino acid residues were identical and similar residues. The β -strands and α -helices of CNA19 determined by X-ray crystallography were indicated by dark bars above the corresponding regions of CNA19. β -strands A, B, a part of D, E and H are the ones that form the observed trench and are indicated by *.

Sequences for CNA19 are identified as SEQ ID NOS. 5 to 8, and sequences for ACE19 are identified as SEQ ID NOS. 8 to 12.

A marked up version of page 50, lines 12-22 is provided.

3B12VLG-4 (variable light sequence)

GAAGTTGTGATGACCCAACTCCACTCTCCCTGCCTGTCAGTCTTGGCGATCACGC
CTCCATCTCTTGCAGATCTAGTCAGCGCCTTGACACAGTAATGAAAACACCTATTT
ACATTGGTATCTGCAGAAGCCAGGCCAGTCTCCAAAGCTCCTGATCTACAAAGTTT
CCAACCGATTTTCTGGGGTCCCAGACAGGTTTCAGTGGCAGTGGATCAGGGACAGA
TTTCACTCAAGATCAGCAGAGTGGAGGCTGAGGATCTGGGAGTTTATTTCTGCT
CTCAAAGTACGCATGTTCTCCACGTTTCGGAGGGGGGACCAGGCTGGAAATAAA
A (SEQ ID NO. 1).

EVVMTQTPLSLPVSLGDHASISCRSSQRLVHSNENTYLHWYLQKPGQSPKLLIYKVS
NRFSGVPDRFSGSGSGTDFTLKISRVEAEDLGVYFCSQSTHVPPTFGGGTRLEIK (SEQ ID NO. 2)

- Amino acids representing a CDR are underlined

A marked up version of page 51, lines 1-12 is provided.

3B12VHB-1 (variable heavy sequence)

CAGGTTTCAGCTGCAGCAGTCTGGAGCTGAGCTGATGAAGCCTGGGGCCTCAGTG
AAGATCTCCTGCAAGGCTGCTGGCTACACATTCAGTCCCTACTGGATAGAGTGGTT
AAAGCAGAGGCCTGGACATGGCCTTGAGTGGATTGGAGAGATTTTACCTGGAAGT
GGAAATATTAACATAATGAGAAGTTCAAGGACAAGGCCACATTCACTGCTGATAC
ATCCTCCAACACAGTTTACATGCAAGTCAGCAGCCTGACATCTGAGGACTCTGCCG
TCTATTACTGTGCAAGAGAGGAGGATGGTTACCCGGCCTGGTTTGCTTACTGGGG
CCAAGGGACTCTGGTCACTGTCTCTGCA (SEQ ID NO. 3)

QVQLQQSGAELMKPGASVKISCKAAGYTFSPYWIEWLKQRPGHGLEWIGEILPGSGNI
NYNEKFKDKATFTADTSSNTVYMQVSSLTSEDSAVYYCAREEDGYPAWFAYWGQGT
LVTVSA (SEQ ID NO. 4)

- Amino acids representing a CDR are underlined

A marked up version of the heading at page 58, line 1 is provided.

Table 1A. Oligonucleotide primers used in this study (SEQ ID NOS. 13 TO 30,
respectively).

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